

Appl. No. 10/801,165  
Amdt. dated July 08, 2005  
Reply to Office action of May 09, 2005

**REMARKS/ARGUMENTS**

Favorable reconsideration and allowance of claim 1 and the claims dependent therefrom is respectfully requested.

The informalities noted by the Examiner in the above-identified patent application are being corrected by the amendment. The phrase "a coplaner fuse" is being deleted from the specification since this phrase refers to U.S. Patent No. 5,867,073 and is not relevant to the written description of the present invention.

At page 3, line 15, the phrase "which is a short approximating  $\lambda_g/4$ " is being replaced with the phrase --The quarter wave choke is a short circuit positioned at one quarter of the waveguide's wavelength.--. At page 4, line 21, the phrase "which is a short approximating  $\lambda_g/4$ " is being replaced with the phrase --The quarter wave choke 29 (Fig. 5) is a short circuit positioned at one quarter of the wavelength for waveguide 16 between upper wall 20 and lower wall 22.--. It is submitted that these clarifications in the written description along with new Figure 5 clearly describe the quarter wave choke 29.

The specification is being amended to insure that the

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reference labels are correspondingly referenced to the drawing figures in which they actually appear. Examples include  $L_1$  which is referenced to --(Fig. 2a)--;  $L_2$  which is referenced to --(Fig. 2b)--;  $Z_{\text{coax}}$  which is referenced to --(Fig. 2b)--; and  $Z_t(L_2)$  which is referenced to --(Fig. 2b)--.

At page 6, line 3, the word "shorted" is being rephrased as --short circuited--.

In equations one and two on page 7 the terms and parameters are now strictly defined. For example, in equation one the term  $Z_g$  is the impedenace of waveguide 16, the term  $B$  equals  $2\pi/\lambda$  where  $\lambda$  is the wavelength for waveguide 16, and the term  $L_1$  (Fig. 2a) is the length for the short circuited end of waveguide 16, Similarly, in equation two the term  $X_c$  (Fig. 2a) is the absolute value of the capacitive reactance of waveguide 16, the term  $X_l$  (Fig. 2a) is the absolute value of the inductive reactance of wavguide 16, and the term  $Z_{44-44}$  (Fig. 2b) is the impedance looking into transformer 30.

The paragraph beginning at page 7, line 2, is being amended to provide for a description of the reference numeral "10" in Figs. 3 and 4, and the reference numeral "16" in Fig. 3.

The Examiner's objections to the drawings are being corrected by presenting new Figs. 5 and 6 and a correction to

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Fig. 2a. Specifically, new Fig. 5 illustrates the quarter wave choke 29 which is positioned at one end of waveguide 16 between upper wall 20 and lower wall 22. The quarter wave choke reference numeral "29" is also being added to the electrical equivalent circuit depicted in Fig. 2a.

New Fig. 6 shows each step 66, 68 and 70 of transformer 60 having a different length. Claim 10 is being canceled by this amendment. Accordingly, a new figure is not being submitted with this amendment to show the outer conductor of transformer 30 as being shaped to match the coaxial line impedance to the impedance of the ridge waveguide 16 when the impedances differ from one another.

The Examiner's objection to the specification as failing to provide proper antecedent basis for the claimed subject matter is being corrected by this amendment. The paragraph beginning at page 8, line 16 is being amended to disclose the transformer 60 as having steps 66, 68 and 70 which are of different lengths as shown in new Fig. 6.

The Examiner's rejection of claims 4 and 21 under 35 U.S.C. 112, second paragraph, as being indefinite is respectfully traversed. Claim 4 is being amended to make it dependent from claim 1. Claim 21 is being canceled by this amendment, therefore

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this rejection no longer applies to claim 21

The Examiner's objections to claims 1, 6, 7, 9, 13, 14, 17, 18 and 19 are being corrected by this amendment. In amended claim 1, line 22, the phrase "which is formed" is being deleted as not necessary.

Claim 1, as emended, includes the limitations of canceled claim 7. In claim 1 at line 12, there is an --a- proceeding the word "stepped". Claim 6 is being canceled by this amendment.

In claim 9, 13, 14, 18 and 19, the recitation "fabricated from" is being rephrased as -comprised of- for an appropriate characterization.

In claim 17, lines 27 and 28, the recitation "wherein said ridge waveguide is terminated by a quarter wave chokew" is being deleted since this recitation is recited twice.

The rejection of claims 1-4, 8 and 9 under 35 U.S.C. 102 as being anticipated by Honda et al is respectfully traversed. As amended, claim 1, includes the limitation of canceled claim 7. The prior art Honda et al transformer 30 does not teach a stepped conductor which has steps of different lengths as now recited in claim 1 and shown in new Fig. 7. Claims 2, 3, 4, 8 and 9 are dependent from claim 1 which, as amended, is allowable.

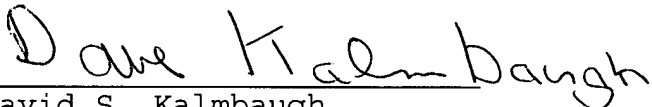
Claims 5 and 6, are being rewritten in independent form in a

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continuing application, which claims the benefit of the filing data for the above-identified application. This continuing application includes all of the changes to the specification required by the Examiner and new Figs. 5 and 6.

In view of the foregoing remarks considered in conjunction with the claims, as amended, it is respectfully submitted that the application is in condition for allowance. The early allowance of claims 1-4, 8-9 and 10-20 and the prompt issuance of this case are earnestly solicited.

Respectfully submitted,

  
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**Amendments to the Drawings:**

The attached sheets of drawings includes changes to Fig. 2a and new Figs. 5 and 6. The first sheet, which includes Figs. 2a-2b replaces the original sheet including Figs. 2a-2b. In Figure 2a, the reference numeral --29-- has been added. The second sheet includes a new Figure 5 which illustrates the quarter wave choke 29 for waveguide 16, and new Figure 6 which illustrates the transformer 60 having steps 66, 68 and 70 of different lengths.

Attachments: Replacement sheet  
New sheet